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carried nothing away, and that he would give it all to her. I do not refuse to give the bill of divorce, which is demanded of me, said he, but I will never return with her.—The judges again gave him warning to take good care of what he did; for our laws, added they, decree that you should either return with her, or that you should repudiate her, in returning her portion. And that if you continue to be unwilling to do any thing, that she should have power to do what she chose to you. Mitra then took up the discourse and continued her address to the judges. It is sufficient for me to see that you are sensible of the justice of my cause, and that taking my part, you are ready to condemn him according to our holy laws, but I no longer desire that he come with me, since he has despised me, I only entreat you one favour, persuade him to give me a kiss, for the last time, and then I will return to my own country. The judges then exhorted Nathan to do what she wished, and to kiss her. She will thus be satisfied, said they, and you will be absolved from the sentence, which we have pronounced against you. Nathan consented, and went over to Mitra; he kissed her;—but at that instant she seized him by the throat, and twisting round his neck, strangled him in an instant; after which she said; this is the recompense of your ingratitude, for not having kept your word with me, for having violated your oath, and having disobeyed the commands of your father. You would have mocked me in wishing to abandon me, and leave me a widow, while my husband was alive. At present your wife is a widow and deserted. It is an ancient saying, *If anyone attempts to deprive me of my husband, may she perish, and may he neither contribute to her pleasure or to mine.* She then turned towards the assembly and said to them; If you wish to avoid the most terrible misfortunes, take my son Solomon and make him your prince, for he is descended from your race. Having killed his father, I do not wish that he should continue with me; his

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presence would renew incessantly my misfortunes, and occasion a continued affliction. Nevertheless I will make him my heir, and I will leave him such great riches, that he shall never want for any thing. You shall also take care that he shall receive a larger portion of his father's inheritance, than his brothers. The assembly accepted the proposal and solemnly established him prince over the people, in taking an oath of fidelity to him, and Mitra returned to her own country to her father.

By this history may be learned, that the command of a parent should never be violated, nor the oaths by which any one is bound, and that a promise should always be kept inviolably.

*Concluded.*

*To the Proprietors of the Belfast Magazine.*

#### AN ACCOUNT OF NEW OPTICAL DISCOVERIES.

GENTLEMEN,

IT was observed by sir Isaac Newton, that when a convex lens, is laid on another, or on a piece of unsilvered looking glass; a set of concentric circles, or rings, each coloured like the rainbow, will appear; he also observed, that if the same apparatus is held between the light and the eye, another set of prismatic rings will also be observed; but the position of the several colours will be different; the former set being composed of reflected, and the latter of transmitted light. But Sir Isaac had not then observed the repeated reflections of the original primary set, which are now known to take place between the two internal surfaces of the upper glass, or lens; these can only be seen by using the shadow of a pen-knife, or a piece of black card, in the manner prescribed by Doctor Herschell, in his very ingenious paper on that subject (see Philosophical Transactions, vol. 95, from page 135 to 180). These prismatic rings may therefore be divided into three kinds, viz. primary, transmitted, and reflected; to which may be added a fourth to be described by and by. The colours of the transmitted sets, are always alter-

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nate to those of the primaries, that is, if the center spot of the primary is black, that of the transmitted will be white; red, and orange, will be opposed to green and blue, &c. But the primary and its *reflected* image, will be perfectly alike in every respect.

Sir Isaac Newton attempted to account for the phenomena of those concentric rings, by supposing them to be produced by the thin plate of air, between the lenses; but this explanation has been found quite unsatisfactory, as many new phenomena have lately been discovered, that are totally irreconcilable with that theory.

A paper on this subject was lately read before the Literary Society of Belfast. Wherein it is shown that if a very thin piece of good unsilvered looking-glass plate, is laid on a lens of forty or fifty inches focal length, a large set of primary concentric rings will appear, and by using the shadow of a piece of black card as above directed by Dr. Herschell, its reflected image will also appear equal in size and colour to the primary. The several rings of which the primary, and its reflected image are composed, will intersect each other. A beautiful set of equidistant parallel lines, or fringes will now appear, drawn through those intersections, and at right angles to a line, joining the centers of the primary and its reflected image, equal in number to those of the rings in each set, and extending indefinitely in length, to two or three times the largest diameters of the rings, and generally to the edge of the lens. The thinner that the piece of looking-glass is, the nearer will the centers of the two sets of rings approach to each other, and the wider and the more distinct will the fringes appear. These parallel lines or fringes are coloured exactly in the same manner as the rings from which they are generated; an idea may be formed of the appearance of one of those fringes, by conceiving a rainbow altered to a straight line. They are composed of two classes, divided by a point bisecting the distance of the centers of the primary, and its reflected image, and each of those classes having the red of each

particular fringe *outside*, or on the side furthest from the bisecting point. This experiment will not succeed well, unless the lower side of the lens, is painted black, to prevent the confusion which would otherwise arise from the appearance of a transmitted set of rings, reflected from the lower surface of the lens.

If a lens, having both of its sides equally convex, is laid between two pieces of looking-glass, two primary sets of rings will be perceived, and the apparatus may be so managed, that the particular rings of each set shall intersect each other, as in the former experiment, in this case the same parallel fringes will appear. But if there shall be *any* difference in the convexity of the two sides of the lens, so as to produce the smallest difference in the diameters of the two primary sets, the parallel fringes will now be changed to a set of circles, or rings; whose diameters will be greater or less, according as the diameters of the primaries shall differ less or more, being least where that difference is greatest, and increasing in size, as the two sets of primaries approach to equality, but always appearing on the same side with the smallest primaries. And what is very singular, although now changed from a set of parallel lines, to a set of circles, those circles still retain the property of being divided into two classes, with respect to the position of the colours of each particular ring, that is, the entire set of these *\*intersectionary* rings, as they may be denominated (for they seem to depend entirely on the intersections of the two sets of primaries) are divided into a central, and an outside class, those composing the central class have the red on the inside of each particular ring, those of the outside class, have the red on the outside. These intersectionary rings, as well as the parallel fringes, are always formed between the surfaces which are in contact of the two lower glasses, and are generally seen from

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\* It is hoped the introduction of a new word is pardonable, when there is no other to express the idea.

twice to thrice the diameters of the primaries, from which they are generated, in which case the entire spot is covered with coloured rings to the center, exactly like primary sets, but if they are much larger, a few rings only at the circumference are seen, and when they are so large as to approach to straight lines, segments only of a few at the circumference can be perceived. Other sets of this new kind of rings, are also formed by the interference of the *intersectionaries*, either with transmitted, or reflected sets, in a beautiful and astonishing variety, which it is scarcely possible to convey an adequate idea of, without seeing the experiment. It is therefore even doubtful, whether the above description can be fully understood, without drawings, which are intended to accompany a future publication, wherein the experiments shall be more fully detailed. This short sketch may therefore be considered as only an *avant courèur*, of that which is to follow. I.K.

Belfast, Sept. 20, 1810.

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For the Belfast Monthly Magazine.

#### ON CONVERSATION.

CONVERSATION is a means of improving our minds, much superior to books, or even to reflection. In sensible conversation we are obliged to bring forth the stores of our minds in an orderly and systematic manner; to hear the objections of others, and either be instructed by them, or answer them.

If we have taken any thing upon trust, either from books or men; if we have viewed any thing superficially, and formed an erroneous judgment upon it, it is conversation that will show us our error; and, having made us abandon our weak possessions, will render us stronger in those that are tenable. By this means we become better acquainted with our minds, and more completely masters of our own ideas.

In the conversation of men of sense, hints are sometimes struck out, that would not disgrace the most profound philosopher; and I think we may say that they will make a stronger

impression on the mind, than when met with in reading.

Epaminondas esteemed conversation a very easy method of gaining instruction; and was on such occasions a diligent hearer of the sentiments of others. He never entered any assembly where any question of either politics or philosophy was discussed, without staying till the end; and we have reason to believe that his improvement was proportionate.

How much, then, ought we to repress every thing that tends to discourage rational conversation; drinking, smoking, gaming, the sneers of affectation, and the long, loud laugh of presumptuous ignorance. This practice of laughing in the midst of what ought to be *polite* argument, is often resorted to, for the purpose of gaining an unreal superiority. It is the means of a weak, untutored, and prejudiced mind to effect a cowardly usurpation in conversation, or to put a stop to it, when above its capacity. Such persons as would laugh in the middle of an interesting moral discussion, would probably with the utmost gravity descant upon the last new fashion, or the proper colour of gloves to be given at a wedding. As for drinking, gaming, &c. I presume they are seldom resorted to by those who are capable of any thing better.

One word more and I have done. In the present state of morals, perhaps the intercourse between the sexes ought to be cautious:—but surely it is a folly for a young lady to imagine she cannot converse with a young man without danger of inspiring him with a passion for her. We were made to improve each other, and our improvement is assisted by frequent, rational, and polite conversation.

E.C.

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For the Belfast Monthly Magazine.

#### REMARKS ON A JOURNEY.

TRAVELLING lately in one of those coaches, which have become so numerous within a few years in this country, and which by facilitating our transitions have made, and will still make us better acquainted with our neighbours; I fell into my usual employment and a